

AMENDMENT TO THE SPECIFICATION

[0010] In the method, oil solubilized “paramagnetic species” are added to the drilling fluid during drilling of the borehole. As used herein, the term “paramagnetic species” shall be understood to mean any chemical entity, molecule or ion comprising any transition metal, and/or lanthanum and/or other rare earth metal, that has paramagnetic character, and/or any persistent organic radical that has paramagnetic character. Persistent organic radicals ~~are~~ have free electrons that “persist” or linger as free or do not quickly or immediately pair with other electrons. The paramagnetic species used in the invention are preferably selected from the group consisting of Fe^{3+} , Mn^{2+} , Ni^{2+} , and Cu^{2+} , Gd^{3+} , and 2,2,6,6-tetramethylpiperidineyl-1-oxyl (also called “TEMPO”) ions, and mixtures thereof, and are preferably selected with characteristics of the formation in mind so that the paramagnetic species selected will be of the type that will not interact with the formation. Preferably a sufficient amount of the paramagnetic species is used so that a quantitative determination of any drilling fluid that filters into the formation may be made as well as detection of the drilling fluid in the formation.